



Quarrybrook

EXPERIENTIAL EDUCATION CENTER

Program Title: **Stone Wall Survey**

Audience: 3rd grade students

Program Theme: Let's conduct a geo-archeological survey of the stone walls found at Quarrybrook! Stone walls are a great example of how New England's human activities are blended into the natural landscape. They form a heritage landscape, combining history and natural history.

Program Goals: Students will understand the stages of stone wall development, starting with the glacial formation of the boulders. Students will recognize stone walls as evidence of past human activity at a site, and as evidence of a different land use in the past. Students will practice their observation and reasoning skills through using a dichotomous key, to distinguish between types of stone walls. Students will notice any differences in the specific stone shapes and understand that they are directly related to the glacial action that rock experienced.

Next Generation/Common Core Connections:

Topic: SS:GE:5 Geography, SS:HI:4 US/NH History

Dimensions: Developing and Using Models
Constructing Explanations and Designing Solutions
Engaging in Argument from Evidence

Program Outline:

Activity 1: TIMELINE SORT (45 min.) – In sub-groups, students will assemble a set of story cards into their historical order, by reading the sentence clues and evaluating the picture shown on each card.

We'll discover how a stone wall's timeline really starts with all the glacial action the rock experienced, then includes the long-ago human work, and now involves the natural processes acting on the rock again, such as weathering and lichen formation.



Teachers and other adults will be helpful in encouraging students to puzzle out the timeline order, by using the word and picture clues on the cards. Teachers are always welcome to make any classroom-connecting comments that contribute to student understanding.

Objectives: Students will understand the sequence involved in the development of the stone walls. Students will know that stone walls are evidence of the agricultural use of this land in the past.

Intended Outcome: Students will be able to put the stages of stone wall development into their historical order, from the glacial formation of the boulders to the current natural processes acting on the rocks.

Activity 2: STONE WALL SURVEY (60 min.) – Next we'll walk to several Quarrybrook stone walls, to take a closer look! We will investigate what info a stone wall can relay to us, when we notice its details.



Teachers and other adults will be helpful in continuing to prompt student inquiry with the investigation questions that the Instructor has asked, as sub-groups explore in the field.

Objective: Students will practice their observation and reasoning skills through using a dichotomous key, to distinguish between types of stone walls.

Intended Outcomes: Students will assess the evidence that stone walls provide, and make conclusions about the history of the walls they are investigating. Students will use the dichotomous key to distinguish between types of stone walls.

Activity 3: GLACIAL SHAPES (15 min.) – As time allows, we'll look at an additional set of clues that the stone walls provide – about the geology of an area! The rocks in a stone wall reflect the bedrock that they are made of, and any glacial action they have experienced.

Objective: Students will know that evidence of the glacial actions the rocks experienced was recorded in their surfaces and shapes, and is still visible and helpful to us today.

Intended Outcome: Students will be able to link a visible surface feature or shape of a rock in a stone wall to its bedrock type or glacial history.

Conclusion/Wrap-up: Modern masons can build about 6 meters of stone wall per day. An 1871 fencing census estimated more than 235,000 miles of stone walls in New England. (Great Britain has 70,000 miles.) Hauling the rock to the field edges initially, and eventually forming them into stone wall structures, represents an “awesome human achievement.” Three billion work hours. 40 million work days. The work done that day by that person still exists.

Successful completion of this program will help support your students' proficiency in NGSS

Performance Expectations:

SS:Geography:5: Environment and Society

Students will demonstrate an understanding of the connections and consequences of the interactions between Earth's physical and human systems.

SS:GE:4:5.1: Illustrate how people modify the physical environment, e.g., irrigation projects or clearing land for human use.

SS:US/NH History:4: Economic Systems & Technology

Students will demonstrate an understanding of the changing forms of production, distribution and consumption of goods and services over time.